

**Version with Markings to Show Changes Made**

**Changes Made to the Claims**

Claims 1 – 12 are cancelled.

Claims 13 – 25 are new.

## Remarks

### Claim Rejections – 35 USC 103

#### Tompkins ivo Dundas

Examiner has rejected Claims 1 – 12 under 35 USC 103(a) as being unpatentable over Tomkins (5,559,720) in view of Dundas (4,189,791). Specifically, Examiner states,

Although Tompkins et al. use water temperature sensor 21 as well as other water sensors to operate the freeze control system, attention is directed to Dundas who discloses another freeze control system for a spa or pool that uses both a water temperature sensor and an ambient air temperature sensor to activate the control system in order to heat the pool using minimal energy with less waste and expense. It would have been obvious to one of ordinary skill in the spa/pool art, at the time the invention was made, to use an ambient air temperature sensor in conjunction with the water temperature sensor in the control system of Tompkins et al. in view of the teachings of Dundas in order to more effectively operate the control system using minimal energy and less waste and expense.

In response, Applicant has canceled Claims 1 – 12 and added new Claims 13 – 25. Independent Claims 13, 19 and 25 now contain the elements “a spa tub containing water” and “spa piping for circulating water to and from said spa tub”. Applicant respectfully asserts that it would not have been obvious to combine the teachings of Dundas with Tompkins. It would not make sense to use Dundas’ device to heat a spa. Indeed, although Examiner states Dundas “...discloses another freeze control system for a spa or pool...”, the word ‘spa’ is never mentioned in Dundas. Nowhere, does Dundas even hint that his device would work for a spa. Applicant’s invention is for maintaining the temperature of the water inside the spa tub and the spa piping above the freezing level. Dundas’ device is for heating a pool that is already well above the freezing level using ambient outside air that is even warmer. (See the example in Dundas, column 3, lines 25 – 42 in which the operator has set the first control 31 at 75 degrees F and the second control 32 at 70 degrees F.) Dundas’ device can also be used for cooling a swimming pool that is so warm that it is uncomfortable to the swimmer. Hence, it would be improper to classify Dundas’ device as a “freeze control system”. Dundas’ device is more accurately classified as a “system for maintaining the temperature of a pool at a comfortable level for swimming”.

It should be noted that in situations involving a spa in which one has to be concerned about freezing, the outside ambient air temperature is usually colder or at least as cold as the temperature of the spa water. Therefore, to use Dundas' device to pump ambient air through a spa would do nothing to protect the spa from freezing. In fact, it would make the water even colder.

Dundas is concerned with heating or cooling a swimming pool inexpensively by using ambient outside air as a source of free warm or cool air. In sharp contrast, Applicant's invention is for maintaining the temperature of the water inside the spa tub and the spa piping above the freezing level by using a heating element. Applicant and Dundas both employ ambient air sensors, but in very different ways for very different purposes. Applicant respectfully suggests that it is unreasonable to assert that merely because Dundas uses a air temperature sensor as part of his invention for maintaining the pool temperature at a comfortable level, that Dundas can be rightfully combined with Tompkins to support a rejection under 35 USC 103.

**Examiner's Response to Arguments**

**No Suggestion to Combine the References**

In responding to Applicant's arguments filed March 2, 2001, Examiner has stated that Examiner recognizes that

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found in either the references themselves or in the knowledge generally available to one of ordinary skill in the art. . . . In this case, motivation is found in the references themselves as stated in the above rejection of the claims.

Applicant respectfully submits that the Dundas device is extremely different than Applicant's device and Tompkins device and there is no suggestion that it would work to prevent freezing of water inside a spa tub and the spa tub's piping. Therefore, Applicant asserts there is no motivation to combine the Tompkins and Dundas references.

### Recitation of a Spa

Examiner has stated "the recitation of a spa has not been given patentable weight because the recitation occurs in the preamble". In response, Applicant submits that independent Claims 13, 19 and 25 now contain the elements "a spa tub containing water" and "spa piping for circulating water to and from said spa tub" within the body of the claim. Therefore, the recitation of spa should be given patentable weight.

### Nonanalogous Art

Examiner has stated "both the Tomkins et al. and Dundas references relate to the common art of freeze control systems for contained bodies of water." In response, Applicant respectfully reasserts that that the Dundas device is improperly classified as a "freeze control system". Instead, Dundas' device is more accurately classified as a "system for maintaining the temperature of a pool at a comfortable level for swimming".

### Recitation of the Intended Use

Examiner has stated

In response to Applicant's argument that the claims have been amended to include the language "for maintaining the temperature of the water inside the spa and the spa's associated piping above the freezing point", a recitation of the intended use of the claimed invention must result in structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art.

In response, for independent Claim 13, Applicant has included the element

a computer programmed to process signals generated by said first sensor and said second sensor, wherein said computer selectively activates and deactivates said heating element and said at least one pump, so that the temperature of the water inside said spa tub and said spa piping is maintained above the freezing level.

For independent Claim 19, Applicant has included the element

a computer programmed to process signals generated by said first sensor and said second sensor, wherein said computer selectively activates and deactivates said heating element, said at least one pump and said at least one air blower, so that the temperature of the water inside said spa tub and said spa piping is maintained above the freezing level.

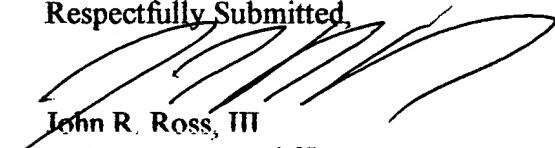
For independent Claim 25, Applicant has included the element

a computer programmed to process signals generated by said ambient air sensor, wherein said computer selectively activates and deactivates said at least one pump so that the temperature of the water inside said spa tub and said spa piping is maintained above the freezing level.

#### CONCLUSION

Thus, for all the reasons given above, this application, as the claims are presently limited, define a novel, patentable, and truly valuable invention. Hence allowance of this application is respectfully submitted to be proper and is respectfully solicited.

Respectfully Submitted,

  
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